WEST Search History

DATE: Thursday, October 09, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L3	L2	38	L3
DB=USPT,PGPB,JPAB,EPAB,DWPI; THES=ASSIGNEE; PLUR=YES; OP=ADJ			
L2	(sorangium cellulosum or S. cellulosum) and epothilone and (gene or dna or cdna)	77	L2
L1	(sorangium cellulosm or S. cellulosum) and epothilone and (gene or dna or cdna)	0	L1

END OF SEARCH HISTORY

WEST

Generate Collection | Print

Search Results - Record(s) 1 through 20 of 38 returned.

☐ 1. Document ID: US 6627427 B1

L3: Entry 1 of 38 File: USPT Sep 30, 2003

US-PAT-NO: 6627427
DOCUMENT-IDENTIFIER: US 6627427 B1

TITLE: Heterologous production of 15-methyl-6-deoxyerthronolide B

DATE-ISSUED: September 30, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Katz; Leonard	Oakland	CA		
Revill; Peter	Oakland	CA		

US-CL-CURRENT: 435/252.3

ABSTRACT:

Recombinant host cells that comprise recombinant DNA expression vectors that drive expression of a product and a precursor for biosynthesis of that product can be used to produce useful products such as polyketides in host cells that do not naturally produce the product or produce the product at low levels due to the absence of the precursor or the presence of the precursor in rate limiting amounts.

12 Claims, 20 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 20

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw. Desc | Image

☐ 2. Document ID: US 6603023 B2

L3: Entry 2 of 38 File: USPT Aug 5, 2003

US-PAT-NO: 6603023
DOCUMENT-IDENTIFIER: US 6603023 B2

TITLE: Synthesis of epothilones, intermediates thereto and analogues thereof

DATE-ISSUED: August 5, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Danishefsky; Samuel J.	Englewood	NJ		
Bertinato; Peter	Old Lyme	CT		
Su; Dai-Shi	Ambler	PA		
Meng; DongFang	New York	NY		
Chou; Ting-Chao	Paramus	NJ		
Kamenecka; Ted	New Brunswick	NJ		
Sorensen; Erik J.	San Diego	CA		
Balog; Aaron	New York	NY		
Savin; Kenneth A.	Indianapolis	IN		
Kuduk; Scott	Harleysville	PA		
Harris; Christina	New York	NY		
Zhang; Xiu-Guo	New York	NY		
Bertino; Joseph R.	Branford	CT		

US-CL-CURRENT: 549/346

ABSTRACT:

The present invention provides convergent processes for preparing epothilone A and B, desoxyepothilones A and B, and analogues thereof, useful in the treatment of cancer and cancer which has developed a multidrug-resistant phenotype. Also provided are intermediates useful for preparing said epothilones.

23 Claims, 117 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 102

☐ 3. Document ID: US 6596875 B2

L3: Entry 3 of 38 File: USPT Jul 22, 2003

US-PAT-NO: 6596875
DOCUMENT-IDENTIFIER: US 6596875 B2

TITLE: Method for synthesizing epothilones and epothilone analogs

DATE-ISSUED: July 22, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
White; James David	Philomath	OR	97370	
Carter; Rich Garrett	Oxford	MS	38655	
Sundermann; Kurt Frederick	Corvallis	OR	97339	

US-CL-CURRENT: 548/204

ABSTRACT:

A method for making epothilones and epothilone analogs is described, as are novel compounds made by the method. One embodiment of the method was used to synthesize epothilone B by a convergent approach that entailed Wittig coupling of an ylide derived from phosphonium bromide with an aldehyde. The former was prepared from propargyl alcohol by a nine-step pathway which installed both trisubstituted double bonds with

clean Z configuration. Macrolactonization of a resulting seco acid provided the following intermediate diene epothilone analog. Selective saturation of the 9,10-olefin and subsequent epoxidation provided epothilone B. ##STR1##

30 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC
Drawi Desc | Image

☐ 4. Document ID: US 6589968 B2

L3: Entry 4 of 38 File: USPT Jul 8, 2003

US-PAT-NO: 6589968
DOCUMENT-IDENTIFIER: US 6589968 B2

TITLE: Epothilone compounds and methods for making and using the same

DATE-ISSUED: July 8, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Arslanian; Robert L.	Pacifica	CA		
Carney; John R.	San Bruno	CA		
Metcalf; Brian	Moraga	CA		

US-CL-CURRENT: 514/365; 548/204

ABSTRACT:

This present invention relates to compounds of formula (I) ##STR1##

and to pharmaceutically acceptable salts and solvates thereof, wherein R.sup.1, R.sup.2, R.sup.3, R.sup.4, R.sup.5, W, X, Y, and Ar are as defined herein. Compounds of formula (I) are useful in the treatment of diseases or conditions characterized by cellular hyperproliferation. This invention also relates to means for the preparation of compounds of formula (I); formulations containing compounds of formula (I); and methods for the use of said compounds and formulations in the treatment of a disease or condition characterized by cellular hyperproliferation, including cancer.

8 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Drawi Desc | Image

☐ 5. Document ID: US 6583290 B1

L3: Entry 5 of 38 File: USPT Jun 24, 2003

US-PAT-NO: 6583290
DOCUMENT-IDENTIFIER: US 6583290 B1

TITLE: 14-methyl epothilone derivatives

DATE-ISSUED: June 24, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Julien; Bryan	Oakland	CA		
Katz; Leonard	Hayward	CA		
Khosla; Chaitan	Palo Alto	CA		
Tang; Li	Foster City	CA		
Ziermann; Rainer	San Mateo	CA		

US-CL-CURRENT: 548/203; 181/205, 546/268.1

ABSTRACT:

Compounds of the invention include 14-mehtyl epothilone derivatives. More generally, preferred compounds of the invention are those that can be produced by altering the epothilone PKS genes as described herein and optionally by action of epothilone modification enzymes and/or by chemically modifying the resulting epothilones produces when those genes are expressed.

2 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

☐ 6. Document ID: US 6576658 B2

L3: Entry 6 of 38 File: USPT Jun 10, 2003

US-PAT-NO: 6576658
DOCUMENT-IDENTIFIER: US 6576658 B2

TITLE: Compositions and uses of dictyostatin compounds

DATE-ISSUED: June 10, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Wright; Amy E.	Ft. Pierce	FL		
Cummins; Jennifer L.	Hackettstown	NJ		
Pomponi; Shirley A.	Ft. Pierce	FL		
Longley; Ross E.	Vero Beach	FL		
Isbrucker; Richard A.	Toronto			CA

US-CL-CURRENT: 514/450

ABSTRACT:

Dictyostatin-1 has been found to stabilize microtubules and prohibit their depolymerization to free tubulin. Because of these activities, the dictyostatin compounds can be used in the treatment of a number of diseases in which aberrant cellular proliferation occurs such as drug-sensitive and drug-resistant cancers, autoimmune disorders, and inflammatory diseases.

2 Claims, 3 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 7. Document ID: US 6524841 B1

L3: Entry 7 of 38 File: USPT Feb 25, 2003

US-PAT-NO: 6524841
DOCUMENT-IDENTIFIER: US 6524841 B1

TITLE: Recombinant megalomicin biosynthetic genes and uses thereof

DATE-ISSUED: February 25, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McDaniel; Robert	Palo Alto	CA		
Volchegursky; Yanina	Emeryville	CA		

US-CL-CURRENT: 435/252.3; 435/252.35, 435/254.11, 435/320.1, 435/325, 435/419, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Recombinant nucleic acids that encode all or a portion of the megAI gene of the megalomicin polyketide synthase (PKS) of Micromonospora megalomicea are used to produce recombinant PKS enzymes in host cells to make megalomicin, megalomicin derivatives, and other polyketides that are useful as antibiotics, motilides, and antiparasitics.

7 Claims, 70 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 70

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 8. Document ID: US 6509455 B1

L3: Entry 8 of 38 File: USPT Jan 21, 2003

US-PAT-NO: 6509455
DOCUMENT-IDENTIFIER: US 6509455 B1

TITLE: Recombinant narbonolide polyketide synthase

DATE-ISSUED: January 21, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ashley; Gary	Alameda	CA		
Betlach; Melanie C.	Burlingame	CA		
Betlach; Mary	San Francisco	CA		
McDaniel; Robert	Palo Alto	CA		
Tang; Li	Foster City	CA		

US-CL-CURRENT: 536/23.2; 435/193, 435/320.1, 536/23.7

ABSTRACT:

Recombinant DNA compounds that encode all or a portion of the narbonolide polyketide synthase are used to express recombinant polyketide synthase genes in host cells for the production of narbonolide, narbonolide derivatives, and polyketides that are useful as antibiotics and as intermediates in the synthesis of compounds with pharmaceutical value.

2 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 6

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 9. Document ID: US 6503737 B1

L3: Entry 9 of 38 File: USPT Jan 7, 2003

US-PAT-NO: 6503737
DOCUMENT-IDENTIFIER: US 6503737 B1

TITLE: Isolated nucleic acids relating to the fkbA gene within the FK-520 polyketide synthase gene cluster

DATE-ISSUED: January 7, 2003

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Reeves; Christopher	Orinda	CA		
Chu; Daniel	Santa Clara	CA		
Khosla; Chaitan	Palo Alto	CA		
Santi; Daniel	San Francisco	CA		
Wu; Kai	Foster City	CA		

US-CL-CURRENT: 435/76; 435/252.3, 435/252.35, 435/320.1, 536/23.1, 536/23.2

ABSTRACT:

Host cells comprising recombinant vectors encoding the FK-520 polyketide synthase and FK-520 modification enzymes can be used to produce the FK-520 polyketide. Recombinant DNA constructs comprising one or more FK-520 polyketide synthase domains, modules, open reading frames, and variants thereof can be used to produce recombinant polyketide synthases and a variety of different polyketides with application as pharmaceutical and veterinary products.

34 Claims, 8 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 9

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 10. Document ID: US 6489314 B1

L3: Entry 10 of 38 File: USPT Dec 3, 2002

US-PAT-NO: 6489314
DOCUMENT-IDENTIFIER: US 6489314 B1

TITLE: Epothilone derivatives and methods for making and using the same

DATE-ISSUED: December 3, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ashley; Gary	Alameda	CA		
Metcalf; Brian	Moraga	CA		

US-CL-CURRENT: 514/183; 540/451, 540/455, 540/461, 540/462, 540/463

ABSTRACT:

The present invention relates to 16-membered macrocyclic compounds. In one aspect of the present invention, compounds of the formula ##STR1##

are provided wherein: R.sup.1, R.sup.2, R.sup.3, and R.sup.5 are each independently hydrogen, C.sub.1 -C.sub.10 alkyl, C.sub.2 -C.sub.10 alkenyl, C.sub.2 -C.sub.10 alkynyl, aryl or alkylaryl; R.sup.4 is hydrogen, halogen, C.sub.1 -C.sub.10 alkyl, C.sub.1 -C.sub.10 hydroxyalkyl, C.sub.1 -C.sub.10 haloalkyl, aryl, --C(.dbd.O)R.sup.6, --C(.dbd.O)OR.sup.6, --NR.sup.6 R.sup.7 where R.sup.6 and R.sup.7 are each independently hydrogen, C.sub.1 -C.sub.10 aliphatic, aryl or alkylaryl; W is O, NR.sup.8 where R.sup.8 is hydrogen, C.sub.1 -C.sub.10 alkyl, C.sub.2 -C.sub.10 alkenyl, C.sub.2 -C.sub.10 alkynyl, aryl or alkylaryl; X is O, CH.sub.2 or a carbon-carbon double bond; Y is absent or a C.sub.1 -C.sub.10 alkyl, C.sub.2 -C.sub.10 alkenyl, or C.sub.2 -C.sub.10 alkynyl; and Ar is aryl; provided that 10,11-dehydroepothilone C is excluded.

27 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 11. Document ID: US 6441186 B1

L3: Entry 11 of 38 File: USPT Aug 27, 2002

US-PAT-NO: 6441186
DOCUMENT-IDENTIFIER: US 6441186 B1

TITLE: Epothilone analogs

DATE-ISSUED: August 27, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nicolaou; Kyriacos C.	La Jolla	CA		
He; Yun	San Diego	CA		
Ninkovic; Sacha	San Diego	CA		
Pastor; Joaquin	San Diego	CA		
Roschangar; Frank	San Diego	CA		
Sarabia; Francisco	Torre de Benagalbon			ES
Vallberg; Hans	Huddinge			SE
Vourloumis; Dionisios	San Diego	CA		
Winssinger; Nicolas	La Jolla	CA		
Yang; Zhen	San Diego	CA		
King; N. Paul	San Diego	CA		
Finlay; M. Ray	San Diego	CA		

US-CL-CURRENT: 548/204

ABSTRACT:

Epothilone A, epothilone B, analogs of epothilone and libraries of epothilone analogs are synthesized. Epothilone A and B are known anticancer agents that derive their anticancer activity by the prevention of mitosis through the induction and stabilization of microtubulin assembly. The analogs of epothilone are novel. Several of the anlogs are demonstrated to have a superior cytotoxic activities as compared to epothilone A or epothilone B as demonstrated by their enhanced ability to induce the polymerization and stabilization of microtubules.

1 Claims, 74 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 74

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Drawi Desc | Image

☐ 12. Document ID: US 6414015 B1

L3: Entry 12 of 38 File: USPT Jul 2, 2002

US-PAT-NO: 6414015
DOCUMENT-IDENTIFIER: US 6414015 B1

TITLE: Laulimalide microtubule stabilizing agents

DATE-ISSUED: July 2, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Mooberry; Susan L.	San Antonio	TX		
Davidson; Bradley S.	River Heights	UT		

US-CL-CURRENT: 514/455; 514/451, 514/461, 514/475

ABSTRACT:

A method of inhibiting the proliferation of a hyperproliferative mammalian cell having a multiple drug resistant phenotype utilizing an amount of a laulimalide compound effective to disrupt the dynamic state of microtubule polymerization and depolymerization to arrest cell mitosis is disclosed, together with laulimalide compounds which find use in such method.

4 Claims, 6 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

---

☐ 13. Document ID: US 6410301 B1

L3: Entry 13 of 38 File: USPT Jun 25, 2002

US-PAT-NO: 6410301
DOCUMENT-IDENTIFIER: US 6410301 B1

TITLE: Myxococcus host cells for the production of epothilones

DATE-ISSUED: June 25, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Julien; Bryan	Oakland	CA		
Katz; Leonard	Hayward	CA		
Khosla; Chaitan	Palo Alto	CA		

US-CL-CURRENT: 435/252.3

ABSTRACT:

Recombinant Myxococcus host cell containing recombinant expression vectors containing epothilone polyketide synthase genes can produce epothilones C and D.

6 Claims, 4 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

---

☐ 14. Document ID: US 6383787 B1

L3: Entry 14 of 38 File: USPT May 7, 2002

US-PAT-NO: 6383787
DOCUMENT-IDENTIFIER: US 6383787 B1
**** See image for Certificate of Correction ****

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: May 7, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/193, 435/252.3, 435/252.35, 435/320.1, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

25 Claims, 0 Drawing figures
Exemplary Claim Number: 1

☐ 15. Document ID: US 6358719 B1

L3: Entry 15 of 38 File: USPT Mar 19, 2002

US-PAT-NO: 6358719
DOCUMENT-IDENTIFIER: US 6358719 B1

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: March 19, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/189; 435/252.3, 435/252.35, 435/320.1, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

25 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 16. Document ID: US 6355459 B1

L3: Entry 16 of 38 File: USPT Mar 12, 2002

US-PAT-NO: 6355459
DOCUMENT-IDENTIFIER: US 6355459 B1

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/189, 435/193, 435/232, 435/252.3, 435/252.35, 435/320.1, 536/23.2

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

115 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 17. Document ID: US 6355458 B1

L3: Entry 17 of 38 File: USPT Mar 12, 2002

US-PAT-NO: 6355458
DOCUMENT-IDENTIFIER: US 6355458 B1

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/189, 435/193, 435/232, 435/252.3, 435/252.35, 435/320.1, 530/300, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

100 Claims, 0 Drawing figures
Exemplary Claim Number: 1

☐ 18. Document ID: US 6355457 B1

L3: Entry 18 of 38 File: USPT Mar 12, 2002

US-PAT-NO: 6355457
DOCUMENT-IDENTIFIER: US 6355457 B1

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: March 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/189, 435/193, 435/195, 435/196, 435/232, 435/252.3, 435/252.35, 435/320.1, 530/300, 536/23.1 , 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

115 Claims, 0 Drawing figures

Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 19. Document ID: US 6346404 B1

L3: Entry 19 of 38 File: USPT Feb 12, 2002

US-PAT-NO: 6346404
DOCUMENT-IDENTIFIER: US 6346404 B1
**** See image for Certificate of Correction ****

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: February 12, 2002

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/189, 435/193, 435/232, 435/252.3, 435/252.35, 435/320.1, 530/350, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

85 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 20. Document ID: US 6316630 B1

L3: Entry 20 of 38 File: USPT Nov 13, 2001

US-PAT-NO: 6316630
DOCUMENT-IDENTIFIER: US 6316630 B1

TITLE: Synthesis of epothilones, intermediates thereto and analogues thereof

DATE-ISSUED: November 13, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Danishefsky; Samuel J.	Englewood	NJ		
Bertinato; Peter	Old Lyme	CT		
Su; Dai-Shi	New York	NY		
Meng; DongFang	New York	NY		
Chou; Ting-Chao	Paramus	NJ		
Kamenecka; Ted	New York	NY		
Sorensen; Erik J	San Diego	CA		
Balog; Aaron	New York	NY		
Savin; Kenneth A.	New York	NY		

US-CL-CURRENT: 546/281.7; 546/340, 548/204, 548/510, 549/494, 549/498, 560/174

ABSTRACT:

The present invention provides convergent processes for preparing epothilone A and B, desoxyepothilones A and B, and analogues thereof, useful in the treatment of cancer and cancer which has developed a multidrug-resistant phenotype. Also provided are intermediates useful for preparing said epothilones.

8 Claims, 75 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 102

WEST

Generate Collection | Print

Search Results - Record(s) 21 through 38 of 38 returned.

☐ 21. Document ID: US 6303767 B1

L3: Entry 21 of 38 File: USPT Oct 16, 2001

US-PAT-NO: 6303767
DOCUMENT-IDENTIFIER: US 6303767 B1

TITLE: Nucleic acids encoding narbonolide polyketide synthase enzymes from streptomyces narbonensis

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Betlach; Melanie C.	San Francisco	CA		
McDaniel; Robert	Palo Alto	CA		

US-CL-CURRENT: 536/23.2; 435/320.1, 536/23.1

ABSTRACT:

Host cells comprising recombinant vectors encoding the narbomycin polyketide synthase and narbomycin modification enzymes from Streptomyces narbonensis can be used to produce narbomycin, picromycin, methymycin, and neomethymycin. Recombinant DNA constructs comprising one or more narbomycin polyketide synthase domains, modules, open reading frames, and variants thereof can be used to produce recombinant polyketide synthases and a variety of different polyketides with application in agriculture, medicine, and animal health.

9 Claims, 2 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 2

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

☐ 22. Document ID: US 6303342 B1

L3: Entry 22 of 38 File: USPT Oct 16, 2001

US-PAT-NO: 6303342
DOCUMENT-IDENTIFIER: US 6303342 B1

TITLE: Recombinant methods and materials for producing epothilones C and D

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Julien; Bryan	Oakland	CA		
Katz; Leonard	Hayward	CA		
Khosla; Chaitan	Palo Alto	CA		
Tang; Li	Foster City	CA		

US-CL-CURRENT: 435/76

ABSTRACT:

Recombinant nucleic acids that encode all or a portion of the epothilone polyketide synthase (PKS) are used to express recombinant PKS genes in host cells for the production of epothilones, epothilone derivatives, and polyketides that are useful as cancer chemotherapeutics, fungicides, and immunosuppressants.

29 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 8

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

☐ 23. Document ID: US 6302838 B1

L3: Entry 23 of 38 File: USPT Oct 16, 2001

US-PAT-NO: 6302838
DOCUMENT-IDENTIFIER: US 6302838 B1
**** See image for Certificate of Correction ****

TITLE: Cancer treatment with epothilones

DATE-ISSUED: October 16, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
O'Reilly; Terence	Basel			CH
Wartmann; Markus	Riehen			CH
Litchman; Manuel	Teaneck	NJ		
Cohen; Pamela	Tenafly	NJ		

US-CL-CURRENT: 514/365

ABSTRACT:

The invention relates to the treatment of a proliferative disease, especially according to certain treatment regimens, with an epothilone, especially with epothilone A and more preferably epothilone B; as well as to the treatment of certain cancers with such an epothilone.

24 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

☐ 24. Document ID: US 6280999 B1

L3: Entry 24 of 38 File: USPT Aug 28, 2001

US-PAT-NO: 6280999
DOCUMENT-IDENTIFIER: US 6280999 B1

TITLE: Sorangium polyketide synthases and encoding DNA therefor

DATE-ISSUED: August 28, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gustafsson; Claes	Belmont	CA		
Betlach; Mary C.	San Francisco	CA		
Ashley; Gary	Alameda	CA		
Julien; Bryan	Oakland	CA		
Ziermann; Rainer	San Mateo	CA		

US-CL-CURRENT: 435/252.3; 435/183, 435/320.1, 435/325, 536/23.2

ABSTRACT:

Novel Sorangium polyketide synthases, and domains thereof, and polynucleotides encoding therefor. Additionally, chimeric polyketide synthases that include domains, or subsets of domains, patterned on said novel polyketide synthases. Methods to prepare polyketide combinatorial libraries are described, as are recombinant host cells in which polyketides are produced.

8 Claims, 7 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 21

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

☐ 25. Document ID: US 6268488 B1

L3: Entry 25 of 38 File: USPT Jul 31, 2001

US-PAT-NO: 6268488
DOCUMENT-IDENTIFIER: US 6268488 B1

TITLE: Prodrug activation using catalytic antibodies

DATE-ISSUED: July 31, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Barbas, III; Carlos F.	Del Mar	CA	92014	
Shabat; Doron	San Diego	CA	92122	
Rader; Christoph	San Diego	CA	92103	
List; Benjamin	San Diego	CA	92102	
Lerner; Richard A.	La Jolla	CA	92037	

US-CL-CURRENT: 536/6.4; 548/204, 549/375, 562/463, 568/448

ABSTRACT:

The present invention provides a compound that includes an active therapeutic agent attached to a blocking moiety that is sensitive to the catalytic action of molecules having retro-aldol and retro-Michael catalytic activity, methods for making such compounds and methods of converting such compounds to active therapeutic agents using molecules having aldolase activity.

15 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 12

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

☐ 26. Document ID: US 6251636 B1

L3: Entry 26 of 38 File: USPT Jun 26, 2001

US-PAT-NO: 6251636
DOCUMENT-IDENTIFIER: US 6251636 B1

TITLE: Recombinant oleandolide polyketide synthase

DATE-ISSUED: June 26, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Betlach; Mary C.	San Francisco	CA		
Shah; Sanjay Krishnakant	Concord	CA		
McDaniel; Robert	Palo Alto	CA		
Tang; Li	Foster City	CA		

US-CL-CURRENT: 435/76; 435/252.35, 435/254.2, 435/320.1, 435/325, 435/419, 536/23.1, 536/23.2

ABSTRACT:

Recombinant DNA compounds that encode all or a portion of the oleandolide polyketide synthase are used to express recombinant polyketide synthase genes in host cells for the production of oleandolide, oleandolide derivatives, and polyketides that are useful as antibiotics and motilides.

22 Claims, 5 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

☐ 27. Document ID: US 6204388 B1

L3: Entry 27 of 38 File: USPT Mar 20, 2001

US-PAT-NO: 6204388
DOCUMENT-IDENTIFIER: US 6204388 B1

TITLE: Synthesis of epothilones, intermediates thereto and analogues thereof

DATE-ISSUED: March 20, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Danishefsky; Samuel J.	Englewood	NJ		
Bertinato; Peter	Old Lyme	CT		
Su; Dai-Shi	New York	NY		
Meng; DongFang	New York	NY		
Chou; Ting-Chao	Paramus	NJ		
Kamenecka; Ted	New York	NY		
Sorensen; Erik J	San Diego	CA		
Balog; Aaron	New York	NY		
Savin; Kenneth A.	New York	NY		
Kuduk; Scott	Harleysville	PA		
Harris; Christina	New York	NY		
Zhang; Xiu-Guo	New York	NY		
Bertino; Joseph R.	Branford	CT		

US-CL-CURRENT: 546/340; 548/204, 548/510, 549/494, 549/498, 560/174

ABSTRACT:

The present invention provides convergent processes for preparing epothilone A and B, desoxyepothilones A and B, and analogues thereof, useful in the treatment of cancer and cancer which has developed a multidrug-resistant phenotype. Also provided are intermediates useful for preparing said epothilones.

9 Claims, 117 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 102

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

---

☐ 28. Document ID: US 6121029 A

L3: Entry 28 of 38 File: USPT Sep 19, 2000

US-PAT-NO: 6121029
DOCUMENT-IDENTIFIER: US 6121029 A

TITLE: Genes for the biosynthesis of epothilones

DATE-ISSUED: September 19, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Schupp; Thomas	Mohlin			CH
Ligon; James Madison	Apex	NC		
Molnar; Istvan	Durham	NC		
Zirkle; Ross	Raleigh	NC		
Cyr; Devon Dawn	Fuquay-Varina	NC		
Gorlach; Jorn	Durham	NC		

US-CL-CURRENT: 435/183; 435/189, 435/193, 435/232, 435/252.3, 435/252.35, 435/320.1,

530/300, 536/23.1, 536/23.2, 536/23.7

ABSTRACT:

Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

115 Claims, 0 Drawing figures
Exemplary Claim Number: 1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 29. Document ID: US 6117659 A

L3: Entry 29 of 38 File: USPT Sep 12, 2000

US-PAT-NO: 6117659
DOCUMENT-IDENTIFIER: US 6117659 A

TITLE: Recombinant narbonolide polyketide synthase

DATE-ISSUED: September 12, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ashley; Gary	Alameda	CA		
Betlach; Melanie C.	Burlingame	CA		
Betlach; Mary	San Francisco	CA		
McDaniel; Robert	Palo Alto	CA		
Tang; Li	Foster City	CA		

US-CL-CURRENT: 435/155; 435/132, 435/189, 435/252.3, 435/252.33, 435/252.35, 435/320.1, 536/23.2, 536/23.7

ABSTRACT:

Recombinant DNA compounds that encode all or a portion of the narbonolide polyketide synthase are used to express recombinant polyketide synthase genes in host cells for the production of narbonolide, narbonolide derivatives, and polyketides that are useful as antibiotics and as intermediates in the synthesis of compounds with pharmaceutical value.

11 Claims, 9 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 7

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

☐ 30. Document ID: US 6090601 A

L3: Entry 30 of 38 File: USPT Jul 18, 2000

US-PAT-NO: 6090601
DOCUMENT-IDENTIFIER: US 6090601 A

TITLE: Sorangium polyketide synthase

DATE-ISSUED: July 18, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gustafsson; Claes	Belmont	CA		
Betlach; Mary C.	San Francisco	CA		

US-CL-CURRENT: 435/183; 435/252.3, 435/320.1, 435/325, 536/23.2

ABSTRACT:

Domains of epothilone polyketide synthase, and polynucleotides encoding therefor. Additionally, chimeric polyketide synthases that include domains, or subsets of domains, patterned on epothilone polyketide synthase. Methods to prepare epothilone in pharmaceutically useful quantitites are described, as are methods to prepare polyketide combinatorial libraries.

24 Claims, 12 Drawing figures
Exemplary Claim Number: 1
Number of Drawing Sheets: 13

☐ 31. Document ID: WO 22139 A2

L3: Entry 31 of 38 File: EPAB Apr 20, 2000

PUB-NO: WO000022139A2
DOCUMENT-IDENTIFIER: WO 22139 A2
TITLE: DNA SEQUENCES FOR ENZYMATIC SYNTHESIS OF POLYKETIDE OR HETEROPOLYKETIDE COMPOUNDS

PUBN-DATE: April 20, 2000

INVENTOR-INFORMATION:

NAME	COUNTRY
BEYER, STEFAN	DE
BLOECKER, HELMUT	DE
BRANDT, PETRA	DE
CINO, PAUL M	US
DOUGHERTY, BRIAN A	US
GOLDBERG, STEVEN L	US
HOFLE, GERHARD	DE
MUELLER, ROLF-JOACHIM	DE
REICHENBACH, HANS	DE

INT-CL (IPC): C12 N 15/52; C12 N 9/00; C12 N 15/63; C12 N 5/10; C12 P 17/06
EUR-CL (EPC): C12N015/52; C12P007/62, C12P017/18

ABSTRACT:

CHG DATE=20001128 STATUS=O>The invention consists of: (1) cloned Sorangium cellulosum polyketide synthase (PKS) biosynthetic cluster DNA; and (2) the nucleotide sequence and predicted protein coding sequences of the cloned DNA. The invention can be used for, but not limited to: (a) increasing yields of PKS product in Sorangium cellulosum (e.g., by amplification or genetic modification of the epothilone gene cluster or its component parts); (b) increasing yields of polyketide product in a heterologous system by transfer of the epothilone gene cluster or its component parts, which may be followed by amplification or genetic modification of the PKS gene cluster or its component parts; (c) modification of the polyketide product chemical structure in either Sorangium cellulosum or a heterologous host (e.g., by genetic modification of the epothilone gene cluster or its component parts; and (d) for the detection of genes and gene products involved in making polyketides or related molecules in other organisms (e.g., by hybridization or complementation assays). DNA sequence and analysis is presented for the following cosmids and plasmids: A2 cosmid; the pEPOcos6 region (overlapping of pEPOcos6 and pEPOcos7); pEPOcos8 cosmid; A5 cosmid; Sau4 (10 kb plasmid).

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 32. Document ID: WO 9966028 A2

L3: Entry 32 of 38 File: EPAB Dec 23, 1999

PUB-NO: WO009966028A2
DOCUMENT-IDENTIFIER: WO 9966028 A2
TITLE: GENES FOR THE BIOSYNTHESIS OF EPOTHILONES

PUBN-DATE: December 23, 1999

INVENTOR-INFORMATION:

NAME	COUNTRY
SCHUPP, THOMAS	CH
LIGON, JAMES MADISON	US
MOLNAR, ISTVAN	US
ZIRKLE, ROSS	US
GOERLACH, JOERN	US
CYR, DEVON	US

INT-CL (IPC): C12 N 9/00
EUR-CL (EPC): C07K014/195; C12P017/18

ABSTRACT:

CHG DATE=20000202 STATUS=O>Nucleic acid molecules are isolated from Sorangium cellulosum that encode polypeptides necessary for the biosynthesis of epothilone. Disclosed are methods for the production of epothilone in recombinant hosts transformed with the genes of the invention. In this manner, epothilone can be produced in quantities large enough to enable their purification and use in pharmaceutical formulations such as those for the treatment of cancer.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

☐ 33. Document ID: EP 1303615 A2 WO 200208440 A2 AU 200179025 A US 20020137152 A1

L3: Entry 33 of 38 File: DWPI Apr 23, 2003

DERWENT-ACC-NO: 2002-241574
DERWENT-WEEK: 200329
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: Production of desoxyepothilone such as epothilone C and/or D as antifungal, anticancer and immunosuppressant, comprises fermenting epothilone producing microorganism in presence of inhibitor of epothilone epoxidase

INVENTOR: ASHLEY, G; METCALF, B ; SANTI, D

PRIORITY-DATA: 2000US-220651P (July 25, 2000), 2001US-0916045 (July 25, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
EP 1303615 A2	April 23, 2003	E	000	C12N015/53
WO 200208440 A2	January 31, 2002	E	042	C12P017/00
AU 200179025 A	February 5, 2002		000	C12P017/00
US 20020137152 A1	September 26, 2002		000	C12P017/16

INT-CL (IPC): C12 N 1/21; C12 N 9/02; C12 N 9/99; C12 N 15/53; C12 P 17/00; C12 P 17/16

ABSTRACTED-PUB-NO: US20020137152A
BASIC-ABSTRACT:

NOVELTY - Producing desoxyepothilone comprising fermenting an epothilone producing microorganism in the presence of an inhibitor of an epothilone epoxidase, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recombinant Sorangium cellulosum host cell which comprises an epoK gene that has been inactivated by mutation that produces epothilone C and/or epothilone D.

ACTIVITY - Antifungal; cytostatic; immunosuppressant. No test details are given in the source material.

MECHANISM OF ACTION - None given.

USE - For producing desoxyepothilone and its derivatives such as epothilone C and/or D (claimed) for use in the fields of agriculture, chemistry, medicinal chemistry, medicine, molecular biology and pharmacology, as antifungal, cancer chemotherapeutics and immunosuppressants.

ADVANTAGE - The method enables to produce desoxyepothilones in a less complex mixture containing lesser amount or none of epoxidated epothilones.
ABSTRACTED-PUB-NO:

WO 200208440A EQUIVALENT-ABSTRACTS:

NOVELTY - Producing desoxyepothilone comprising fermenting an epothilone producing microorganism in the presence of an inhibitor of an epothilone epoxidase, is new.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for a recombinant Sorangium cellulosum host cell which comprises an epoK gene that has been inactivated by mutation that produces epothilone C and/or epothilone D.

ACTIVITY - Antifungal; cytostatic; immunosuppressant. No test details are given in the source material.

MECHANISM OF ACTION - None given.

USE - For producing desoxyepothilone and its derivatives such as epothilone C and/or D

(claimed) for use in the fields of agriculture, chemistry, medicinal chemistry, medicine, molecular biology and pharmacology, as antifungal, cancer chemotherapeutics and immunosuppressants.

ADVANTAGE - The method enables to produce desoxyepothilones in a less complex mixture containing lesser amount or none of epoxidated epothilones.

☐ 34. Document ID: ZA 200007145 A

L3: Entry 34 of 38 File: DWPI Dec 24, 2001

DERWENT-ACC-NO: 2002-500968
DERWENT-WEEK: 200253
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: New nucleic acid encoding polypeptide involved in biosynthesis of epothilone, useful for recombinant production of larger quantities of epothilone

INVENTOR: CYR, D; GOERLACH, J ; LIGON, J M ; MOLMAR, I ; SCHUPP, T ; ZIRKLE, R

PRIORITY-DATA: 1998US-0099503 (June 18, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
ZA 200007145 A	December 24, 2001		084	C07D000/00

INT-CL (IPC): C07 D 0/00; C07 K 0/00; C12 N 0/00

ABSTRACTED-PUB-NO: ZA 200007145A
BASIC-ABSTRACT:

NOVELTY - An isolated nucleic acid molecule (I) comprising a nucleotide sequence that encodes at least one polypeptide involved in the biosynthesis of epothilone, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene (II) comprising a heterologous promoter sequence operatively linked to (I);

(2) a recombinant vector comprising (II);

(3) a recombinant host cell comprising (II);

(4) a bacterial artificial clone (BAC) comprising (I);

(5) an isolated nucleic acid molecule (III) comprising a nucleotide sequence that encodes at least one epothilone synthase domain;

(6) an isolated nucleic acid molecule (IV) comprising a nucleotide sequence that encodes a non-ribosomal peptide synthetase;

(7) heterologous expression (M1) of epothilone in a recombinant host comprising introducing (II) into a host and growing the host in conditions that allow biosynthesis of epothilone in the host;

(8) producing epothilone comprising expressing epothilone by M1 and extracting epothilone from the recombinant host; and

(9) an isolated polypeptide (V) comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic. No supporting data is given in the source material.

MECHANISM OF ACTION - None given in the source material.

USE - Nucleic acids isolated from Sorangium cellulosum encoding polypeptides necessary for the biosynthesis of epothilone are useful for the production of epothilone in recombinant hosts transformed with the genes. Epothilone is useful for the treatment of cancer.

ADVANTAGE - Advantages of the new method include cheaper cost of production, greater quantities of epothilone production and production of compounds with a preferred enantiomer.

☐ 35. Document ID: KR 2003032942 A WO 200183800 A2 AU 200195195 A US 20020156110 A1 US 6489314 B1 US 20030045711 A1 US 20030073205 A1 EP 1320611 A2 US 6589968 B2

L3: Entry 35 of 38 File: DWPI Apr 26, 2003

DERWENT-ACC-NO: 2002-075167
DERWENT-WEEK: 200354
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: Recombinant host cells useful for producing polyketides e.g. epothilone or its derivatives, comprises a recombinant expression vector encoding a heterologous polyketide synthase gene

INVENTOR: ARSLANIAN, R L; ASHLEY, G ; FRYKMAN, S ; JULIEN, B ; KATZ, L ; KHOSLA, C ; LAU, J ; LICARI, P J ; REGENTIN, R ; SANTI, D ; TANG, L ; CARNEY, J R ; METCALF, B ; CARNEY, J

PRIORITY-DATA: 2001US-269020P (April 13, 2001), 2000US-0560367 (April 28, 2000), 2000US-232696P (September 14, 2000), 2000US-257517P (December 21, 2000), 2001US-0825856 (April 3, 2001), 2001US-0825876 (April 3, 2001), 2002US-0115198 (April 2, 2002)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 2003032942 A	April 26, 2003		000	C12N005/10
WO 200183800 A2	November 8, 2001	E	221	C12P017/00
AU 200195195 A	November 12, 2001		000	C12P017/00
US 20020156110 A1	October 24, 2002		000	C07D417/02
US 6489314 B1	December 3, 2002		000	A61K031/33
US 20030045711 A1	March 6, 2003		000	C07D487/02
US 20030073205 A1	April 17, 2003		000	C12P017/00
EP 1320611 A2	June 25, 2003	E	000	C12N015/52
US 6589968 B2	July 8, 2003		000	C07D277/20

INT-CL (IPC): A61 K 31/33; A61 K 31/426; A61 K 31/427; C07 D 225/02; C07 D 225/04; C07 D 277/20; C07 D 291/00; C07 D 313/00; C07 D 313/20; C07 D 407/02; C07 D 413/06; C07 D 417/02; C07 D 417/06; C07 D 487/02; C07 D 491/00; C07 D 493/04; C07 D 493/06; C12 N 1/21; C12 N 5/10; C12 N 9/00; C12 N 15/52; C12 N 15/74; C12 P 17/00; C12 P 17/02; C12 P 17/16; C12 P 17/18; C12 N 1/21; C12 R 1:01

ABSTRACTED-PUB-NO: WO 200183800A
BASIC-ABSTRACT:

NOVELTY - A recombinant host cell, (I), of the suborder Cystobacterineae comprising a recombinant expression vector encoding a heterologous polyketide synthase (PKS) gene

and produces a polyketide synthesized by the PKS enzyme encoded on the vector, is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) an epothilone derivative of formula (II) produced by culturing (I) with a diketide equivalent compound of formula (III);

(2) purifying (M1) an epothilone from a cell that produces epothilone, comprises culturing the cell in the presence of XAD resin, eluting epothilone from the resin, performing a solid phase extraction of epothilone eluted from the resin, and performing chromatography on epothilone resulting from the solid phase extraction;

(3) crystalline epothilone D obtained after purification of epothilone from a cell;

(4) fermentation (M2) of a Myxococcus host cell, comprising culturing the cell in liquid medium comprising a fatty acid or oil as a carbon source; and

(5) an isolated compound of formula (IV).

R1, R2, R3, R5, R11, and R12 = hydrogen, methyl, or ethyl;

R4, R6 and R9 = hydrogen, hydroxyl, or oxo;

R5 and R6 = together from a carbon carbon double bond;

R7 = hydrogen, methyl, or ethyl;

R8 and R10 = both hydrogen or together from a carbon carbon double bond or an epoxide;

Ar = aryl;

W = O or NR13;

R13 = hydrogen, 1-10C aliphatic, aryl or alkylaryl;

R7a = hydrogen or methyl; and

Ary = aryl selected from formulas of (1)-(26);

R = hydrogen, hydroxy, halogen, amino, 1-5C alkyl, 1-5C hydroxyalkyl, 1-5C alkoxy, and 1-5C aminoalkyl.

ACTIVITY - Cytostatic; antipsoriatic; antiarthritic; antiarteriosclerotic; antiinflammatory; neuroprotective; vasotropic.

MECHANISM OF ACTION - Modulator.

USE - (I) is useful for producing a polyketide. (M1) is also useful for treating cancer, hyperproliferative diseases and conditions such as psoriasis, inflammation, sarcomas, neoplasms, lymphomas, multiple sclerosis, rheumatoid arthritis, atherosclerosis and/or restenosis. It improves polyketide production in any organism and also for production of products of recombinant PKS genes and modification enzymes.

ADVANTAGE - The host cell produces epothilones or epothilone derivatives that is easier to manipulate and ferment than the natural producer Sorangium cellulosum and that produces more of the desired polyketide product. (I) produces polyketides as high levels and are useful in the production of not only epothilones, including new epothilone derivatives, but also other polyketides.

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Clip Img | Image

☐ 36. Document ID: US 6583290 B1 WO 200031247 A2 AU 200017377 A EP 1135470 A2 US 6303342 B1 KR 2001093103 A CN 1333820 A US 6410301 B1 JP 2002530107 W US 20030096381 A1

L3: Entry 36 of 38 File: DWPI Jun 24, 2003

DERWENT-ACC-NO: 2000-400061
DERWENT-WEEK: 200343
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: Novel DNA molecules encoding modified epothilones useful in the treatment of tumors

INVENTOR: JULIEN, B; KATZ, L ; KHOSLA, C ; TANG, L ; ZIERMANN, R

PRIORITY-DATA: 1999US-130560P (April 22, 1999), 1998US-109401P (November 20, 1998), 1999US-119386P (February 10, 1999), 1999US-122620P (March 3, 1999), 1999US-0443501 (November 19, 1999), 2000US-0560367 (April 28, 2000), 2000US-0724882 (November 28, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 6583290 B1	June 24, 2003		000	C07D277/22
WO 200031247 A2	June 2, 2000	E	136	C12N015/00
AU 200017377 A	June 13, 2000		000	
EP 1135470 A2	September 26, 2001	E	000	C12N009/00
US 6303342 B1	October 16, 2001		000	C12P019/62
KR 2001093103 A	October 27, 2001		000	C12N015/52
CN 1333820 A	January 30, 2002		000	C12N009/00
US 6410301 B1	June 25, 2002		000	C12N001/20
JP 2002530107 W	September 17, 2002		190	C12N015/09
US 20030096381 A1	May 22, 2003		000	C12P017/16

INT-CL (IPC): A61 K 31/365; A61 K 31/427; A61 K 31/529; A61 K 31/537; A61 P 35/00; A61 P 43/00; C07 D 277/22; C07 D 277/28; C07 D 313/00; C07 D 417/06; C07 D 421/00; C07 D 493/04; C07 D 493/08; C07 D 498/08; C07 H 21/04; C12 N 1/15; C12 N 1/19; C12 N 1/20; C12 N 1/21; C12 N 5/10; C12 N 9/00; C12 N 9/10; C12 N 15/00; C12 N 15/09; C12 N 15/52; C12 N 15/74; C12 P 17/06; C12 P 17/16; C12 P 19/62; C12 P 21/02; C12 N 1/21; C12 N 1/21; C12 N 9/00; C12 N 9/00; C12 P 17/16; C12 P 17/16; C12 R 1:38; C12 R 1:38; C12 R 1:38; C12 R 1:465; C12 R 1:465; C12 R 1:465

ABSTRACTED-PUB-NO: US 6303342B
BASIC-ABSTRACT:

NOVELTY - An isolated recombinant nucleic acid (I) comprising a sequence encoding at least a domain of epothilone polyketide synthase (PKS) and/or a functional region of an epothilone modification enzyme.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a recombinant DNA vector comprising (I) ;

(2) producing a polyketide comprising culturing the cells in (2);

(3) a recombinant Sorangium cellulosum comprising a mutated gene for an epothilone PKS protein or epothilone modification enzyme, the gene being inserted into the genome of the cell following homologous recombination with a vector comprising all or part of the gene;

(4) recombinant Myxococcus or Streptomyces cells expressing a gene for an epothilone PKS protein or epothilone modification enzyme, optionally comprising one or more epothilone PKS protein or epothilone modification enzyme genes integrated into their chromosomal DNA and/or one or more epothilone modification enzyme genes on an extrachromosomal expression vector;

(5) producing epothilone or derivative comprising culturing the cells in (5);

(6) a modified epothilone PKS with a modification comprising:

(i) replacement of at least one AT domain with an AT domain of a different specificity;

(ii) inactivation of the NRPS-like module 1 or of the KS2 catalytic domain;

(iii) inactivation of at least one activity in at least one beta -carbonyl modification domain;

(iv) addition of at least one of KR, DH and ER activity in at least one beta -carbonyl modification domain; and

(v) replacement of the NRPS module 1 with a NRPS of a different specificity;

(7) preparing an epothilone derivative comprising providing substrates including extender units to the modified PKS in (7);

(8) an epothilone PKS modified by inactivation of the NRPS of module 1 or the KS2 of module 2;

(9) preparing an epothilone derivative comprising contacting (9) with a module 2 or 3 substrate and extender units;

(10) host cells comprising (I), (6) or (8);

(11) 16-desmethyl epothilones, 14-methyl epothilones, 11-hydroxyl epothilones, 10-methyl epothilones, 8,9-anhydro epothilones, 9-keto epothilones, 8-desmethyl epothilones and 6-desmethyl epothilones; and

(12) a recombinant PKS enzyme comprising one or more domains, modules or proteins of a non-epothilone PKS and one or more domains, modules or proteins from a epothilone PKS and/or a loading domain comprising a KSQ domain.

USE - The recombinant DNA molecules are useful in the synthesis of the epothilones A, B, C and D. These compounds are useful in the treatment of certain cancers.
ABSTRACTED-PUB-NO:

US 6410301B EQUIVALENT-ABSTRACTS:

NOVELTY - An isolated recombinant nucleic acid (I) comprising a sequence encoding at least a domain of epothilone polyketide synthase (PKS) and/or a functional region of an epothilone modification enzyme.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a recombinant DNA vector comprising (I) ;

(2) producing a polyketide comprising culturing the cells in (2);

(3) a recombinant Sorangium cellulosum comprising a mutated gene for an epothilone PKS protein or epothilone modification enzyme, the gene being inserted into the genome of the cell following homologous recombination with a vector comprising all or part of the gene;

(4) recombinant Myxococcus or Streptomyces cells expressing a gene for an epothilone PKS protein or epothilone modification enzyme, optionally comprising one or more epothilone PKS protein or epothilone modification enzyme genes integrated into their chromosomal DNA and/or one or more epothilone modification enzyme genes on an extrachromosomal expression vector;

(5) producing epothilone or derivative comprising culturing the cells in (5);

(6) a modified epothilone PKS with a modification comprising:

(i) replacement of at least one AT domain with an AT domain of a different specificity;

(ii) inactivation of the NRPS-like module 1 or of the KS2 catalytic domain;

(iii) inactivation of at least one activity in at least one beta -carbonyl modification domain;

(iv) addition of at least one of KR, DH and ER activity in at least one beta -carbonyl modification domain; and

(v) replacement of the NRPS module 1 with a NRPS of a different specificity;

(7) preparing an epothilone derivative comprising providing substrates including extender units to the modified PKS in (7);

(8) an epothilone PKS modified by inactivation of the NRPS of module 1 or the KS2 of module 2;

(9) preparing an epothilone derivative comprising contacting (9) with a module 2 or 3 substrate and extender units;

(10) host cells comprising (I), (6) or (8);

(11) 16-desmethyl epothilones, 14-methyl epothilones, 11-hydroxyl epothilones, 10-methyl epothilones, 8,9-anhydro epothilones, 9-keto epothilones, 8-desmethyl epothilones and 6-desmethyl epothilones; and

(12) a recombinant PKS enzyme comprising one or more domains, modules or proteins of a non-epothilone PKS and one or more domains, modules or proteins from a epothilone PKS and/or a loading domain comprising a KSQ domain.

USE - The recombinant DNA molecules are useful in the synthesis of the epothilones A, B, C and D. These compounds are useful in the treatment of certain cancers.

NOVELTY - An isolated recombinant nucleic acid (I) comprising a sequence encoding at least a domain of epothilone polyketide synthase (PKS) and/or a functional region of an epothilone modification enzyme.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following:

(1) a recombinant DNA vector comprising (I) ;

(2) producing a polyketide comprising culturing the cells in (2);

(3) a recombinant Sorangium cellulosum comprising a mutated gene for an epothilone PKS protein or epothilone modification enzyme, the gene being inserted into the genome of the cell following homologous recombination with a vector comprising all or part of the gene;

(4) recombinant Myxococcus or Streptomyces cells expressing a gene for an epothilone PKS protein or epothilone modification enzyme, optionally comprising one or more epothilone PKS protein or epothilone modification enzyme genes integrated into their chromosomal DNA and/or one or more epothilone modification enzyme genes on an extrachromosomal expression vector;

(5) producing epothilone or derivative comprising culturing the cells in (5);

(6) a modified epothilone PKS with a modification comprising:

(i) replacement of at least one AT domain with an AT domain of a different specificity;

(ii) inactivation of the NRPS-like module 1 or of the KS2 catalytic domain;

(iii) inactivation of at least one activity in at least one beta -carbonyl modification domain;

(iv) addition of at least one of KR, DH and ER activity in at least one beta -carbonyl modification domain; and

(v) replacement of the NRPS module 1 with a NRPS of a different specificity;

(7) preparing an epothilone derivative comprising providing substrates including extender units to the modified PKS in (7);

(8) an epothilone PKS modified by inactivation of the NRPS of module 1 or the KS2 of module 2;

(9) preparing an epothilone derivative comprising contacting (9) with a module 2 or 3 substrate and extender units;

(10) host cells comprising (I), (6) or (8);

(11) 16-desmethyl epothilones, 14-methyl epothilones, 11-hydroxyl epothilones, 10-methyl epothilones, 8,9-anhydro epothilones, 9-keto epothilones, 8-desmethyl epothilones and 6-desmethyl epothilones; and

(12) a recombinant PKS enzyme comprising one or more domains, modules or proteins of a non-epothilone PKS and one or more domains, modules or proteins from a epothilone PKS and/or a loading domain comprising a KSQ domain.

USE - The recombinant DNA molecules are useful in the synthesis of the epothilones A, B, C and D. These compounds are useful in the treatment of certain cancers.

WO 200031247A

☐ 37. Document ID: JP 2002527067 W DE 19846493 A1 WO 200022139 A2 AU 9965126 A EP 1119628 A2

L3: Entry 37 of 38 File: DWPI Aug 27, 2002

DERWENT-ACC-NO: 2000-294101
DERWENT-WEEK: 200271
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: DNA sequence coding for products involved in the biosynthesis of polyketide or heteropolyketide compounds, especially epothilone

INVENTOR: BEYER, S; MUELLER, R ; BLOECKER, H ; BRANDT, P ; CINO, P M ; DOUGHERTY, B A ; GOLDBERG, S L ; HOFLE, G ; REICHENBACH, H

PRIORITY-DATA: 1998DE-1046493 (October 9, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 2002527067 W	August 27, 2002		244	C12N015/09
DE 19846493 A1	April 13, 2000		036	C12N015/52
WO 200022139 A2	April 20, 2000	E	000	C12N015/52
AU 9965126 A	May 1, 2000		000	C12N015/52
EP 1119628 A2	August 1, 2001	E	000	C12N015/52

INT-CL (IPC): C07 D 493/04; C12 N 1/21; C12 N 5/10; C12 N 9/00; C12 N 15/09; C12 N 15/52; C12 N 15/63; C12 P 1/04; C12 P 7/26; C12 P 17/06; C12 N 1/21; C12 N 1/21; C12 N 1/21; C12 R 1:01; C12 R 1:19; C12 R 1:465

ABSTRACTED-PUB-NO: DE 19846493A
BASIC-ABSTRACT:

NOVELTY - A DNA sequence (I) whose expression products effect or are involved in the

enzymatic biosynthesis, mutasynthesis or partial synthesis of polyketide or heteropolyketide compounds (II) is new.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for the following: (1) a recombinant expression vector containing (I); (2) a prokaryotic or eukaryotic cell transformed or transfected with (I) or the vector of (1); (3) a process for the enzymatic biosynthesis, mutasynthesis or partial synthesis of (II), comprising culturing the cell of (2) in a culture medium and isolating (II) from the medium.

USE - (I) can be inserted into an expression vector and used to transform or transfect prokaryotic or eukaryotic cells with the aim of obtaining strains that produce large amounts of polyketide or heteropolyketide compounds, especially epothilones, which have cytotoxic and/or immunosuppressant and antibiotic and antifungal activities and are useful as plant-protection agents.

DESCRIPTION OF DRAWING(S) - The figure shows a list of open reading frames (ORFs) and their function and position in the genome of Sorangium cellulosum.

☐ 38. Document ID: US 20020192778 A1 WO 9966028 A2 AU 9946116 A US 6121029 A CZ 200004693 A3 BR 9911349 A EP 1088078 A2 NO 200006195 A SK 200001924 A3 CN 1305530 A KR 2001052962 A HU 200102186 A2 US 6346404 B1 US 6355457 B1 US 6355458 B1 US 6355459 B1 US 6358719 B1 MX 2000012342 A1 US 6383787 B1 JP 2002518004 W AU 753567 B

L3: Entry 38 of 38 File: DWPI Dec 19, 2002

DERWENT-ACC-NO: 2000-097741
DERWENT-WEEK: 200303
COPYRIGHT 2003 DERWENT INFORMATION LTD

TITLE: New isolated epothilone synthase genes, used for the recombinant production of epothilone for use in cancer therapy

INVENTOR: CYR, D; GOERLACH, J ; LIGON, J M ; MOLNAR, I ; SCHUPP, T ; ZIRKLE, R ; CYR, D D ; GORLACH, J

PRIORITY-DATA: 1999US-118906P (February 5, 1999), 1998US-0099504 (June 18, 1998), 1998US-101631P (September 24, 1998), 1998US-155183P (June 18, 1998), 1999US-0335409 (June 17, 1999), 2000US-0568102 (May 10, 2000), 2000US-0567969 (May 10, 2000), 2000US-0568480 (May 10, 2000), 2000US-0568486 (May 10, 2000), 2000US-0568472 (May 10, 2000), 2000US-0567899 (May 10, 2000), 2001US-0014717 (November 13, 2001)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 20020192778 A1	December 19, 2002		000	C12P021/02
WO 9966028 A2	December 23, 1999	E	173	C12N009/00
AU 9946116 A	January 5, 2000		000	C12N009/00
US 6121029 A	September 19, 2000		000	C12N009/00
CZ 200004693 A3	March 14, 2001		000	C12N009/00
BR 9911349 A	March 13, 2001		000	C12N009/00
EP 1088078 A2	April 4, 2001	E	000	C12N015/52
NO 200006195 A	February 16, 2001		000	C12N000/00
SK 200001924 A3	July 10, 2001		000	C12N015/52
CN 1305530 A	July 25, 2001		000	C12N015/52
KR 2001052962 A	June 25, 2001		000	C12N015/52
HU 200102186 A2	October 29, 2001		000	C12N015/52
US 6346404 B1	February 12, 2002		000	C12N009/00
US 6355457 B1	March 12, 2002		000	C12N009/00
US 6355458 B1	March 12, 2002		000	C12N009/00
US 6355459 B1	March 12, 2002		000	C12N009/00
US 6358719 B1	March 19, 2002		000	C12N009/02
MX 2000012342 A1	June 1, 2001		000	C12N009/00
US 6383787 B1	May 7, 2002		000	C12N009/00
JP 2002518004 W	June 25, 2002		200	C12N015/09
AU 753567 B	October 24, 2002		000	C12N009/00

, US 6355459 B1 , US 6358719 B1 INT-CL (IPC): A61 P 35/00; C07 D 493/00; C07 H 21/04; C07 K 14/535; C07 K 17/00; C12 N 0/00; C12 N 1/20; C12 N 1/21; C12 N 9/00; C12 N 9/02; C12 N 9/10; C12 N 15/09; C12 N 15/52; C12 N 15/74; C12 P 7/00; C12 P 21/02; C12 N 1/21; C12 N 15/09; C12 R 1:01; C12 R 1:465

ABSTRACTED-PUB-NO: US 6121029A
BASIC-ABSTRACT:

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.
ABSTRACTED-PUB-NO:

US 6346404B EQUIVALENT-ABSTRACTS:

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase

which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

US 6355457B

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

US 6355458B

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

US 6355459B

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

US 6358719B

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

US 6383787B

NOVELTY - Isolated epothilone synthase genes from Sorangium cellulosum are new.

DETAILED DESCRIPTION - (A) A novel isolated nucleic acid molecule (NAM) comprises a nucleotide sequence (NS) that encodes at least one polypeptide involved in the biosynthesis of epothilone.

INDEPENDENT CLAIMS are also included for the following:

(1) a chimeric gene comprising a heterologous promoter sequence operatively linked to a NAM as in (A);

(2) a recombinant vector comprising a chimeric gene as in (1);

(3) a recombinant host cell comprising a chimeric gene as in (1);

(4) a Bac clone comprising a NAM as in (A);

(5) an isolated NAM comprising a NS that encodes at least one epothilone synthase domain;

(6) an isolated NAM comprising a NS that encodes a non-ribosomal peptide synthetase which comprises an amino acid sequence similar to an amino acid sequence selected from amino acids 72-81, 118-125, 199-212, 353-363, 549-565, 588-603, 669-684, 815-821, 868-892, 903-912, 918-940, 1268-1274, 1285-1297, 973-1256 and 1344-1351 of sequence (I) of 1410 amino acids (given in the specification), and

(7) an isolated polypeptide comprising an amino acid sequence that consists of an epothilone synthase domain.

ACTIVITY - Cytostatic.

USE - The NAMs can be used for the production of epothilones which can be used for the treatment of cancer. Because epothilones mimic the biological effects of taxol, epothilones may be substituted for taxol in compositions and methods utilizing taxol in the treatment of cancer.

ADVANTAGE - None given.

WO 9966028A

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

Generate Collection | Print

Terms	Documents
L2	38

Display Format: - Change Format

Previous Page Next Page